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THE WEST AMERICAN SCIENTIST

C. R. ORCUTT, EDITOR AND PUBLISHER.

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THE WEST AMERICAN SCIENTIST

Official organ of the San Diego Society of Natural History. A Popular Review and Record for the Pacific Slope.

SAN DIEGO COUNTY, CAL,

San Diego County is situate in the southern extremity of California—the Pacific ocean on the west, and the grand Colorado river on the east. The Coast Range divides the County into two grand divisions. The eastern side has some good land, but is noted chiefly for its valuable mines and minerals. The western side slopes toward the ocean, is interspersed with plains, valleys and table lands, running streams, timber and productive soils. It is well adapted to the diversified pursuits of agriculture, horticulture and grazing. It is this part of the County which is now being rapidly improved. The area of the County is equal to that of Massachusetts, Connecticut and Rhode Island combined—being 14,969 square miles. Population of the County in 1880 was 8618; in 1884 it had increased to 13,000. Assessed valuation in 1880 was $3,525,253; in 1884, $8,140,000.

One of the most important topographical features of the County is the Bay of San Diego—a beautiful sheet of water more than 15 miles long, being the only land-locked harbor south of the Bay of San Francisco within American territory. The country embraced within the boundary lines of the County presents a constant succession of mountains, valleys and table lands, giving a wide range of adaptation to industrial pursuits and the climatic conditions suited to almost any possible need or preference.

Two transcontinental railways traverse the County—the Atlantic & Pacific and the Southern Pacific. Along the lines of these roads, and in other parts of the interior of the County, are many thrifty towns and settlements, which cannot here be described or mentioned, but just such localities as many would like for health, profit and a pleasant home.

The whole range of farm and garden productions of every kind, raised anywhere in the United States, are successfully and profitably grown here, as well as a long list of tropical and semi-tropical fruits—such as figs, lemons, limes, oranges, olives, bananas, and many others—all unsurpassed in either size, quantity or quality.

Pamphlets and other descriptive matter furnished free. Address,

Immigration Association, San Diego, Cal.

The West American Scientist.

Vol. I. San Diego, Calif., October, 1885. No. 10.

BOTANY OF THE CORONADOS ISLANDS.

On the 16th. of May last on my return course from Guadaloupe and Cedros in company with Mr. Dunn, I had the pleasure of a three hours ramble on the principle one of the group of rocky islets above named. The chief object I had in view on landing was the obtaining of good specimens and a more thorough knowledge of the little known Lavatera insularis, peculiar to this island.

On a single mile's length of rocky ridge rising sharply from the sea, no great number of species of flowering plants would be looked for. The only portion of the island presenting any level, or even gently sloping, surface is the north end; and here would have been found, at an earlier date in the year, a rank growth of a very considerable number of the familiar annuals of Southern California. This year, the early drought had brought them to a dwarfed and early maturity.

Almost the only species remaining in good condition, of both flower and fruit, proves to be a new Malacothrix.

The southern half of the island was not visited; but its rocky and sterile aspect is not inviting. The Lavatera occurs in considerable abundance, on the east side, about midway of the ridge and near its highest part, mostly in the shade of high, precipitous rocks.

The following list of nearly seventy species of flowering plants and ferns will hardly prove exhaustive. A more favorable season as regards rainfall and more thorough exploration of all parts of the islet may raise the number to eighty or ninety species. As on all our coast islets where no goats or sheep have yet grazed, the luxuriance of the plants is something to delight every botanist. On these little spots only can one form a just conception of what meadows of the Pacific coast were fifty years ago.

Clematis pauciflora, Nutt.
Delphinium simplex, Dougl.
Eschscholtzia peninsularis, Greene,
Lepideum nitidum, Nutt.
Isomeris arborea, Nutt.
Oligomeris subulata, Boiss.
Silena laciniata, Cav.

Lavatera insularis, Watson. A widely branching shrub, 3–6 ft. high; not an herbaceous perennial, as supposed by Mr. Watson. The flowers are exactly those of L Guadaloupensis, but the foliage and the involucres are different.

Erodium cicutarium, L'Her.

Rhus integrifolia, Nutt.

Trifolium tridentatum, Lindl.

Hosackia glabra, Torr.

Astragalus leucopsis, Torrey & gray.

Cotyledon (4 species undetermined),

Echinocystis macrocarpa, Greene,

Mamillaria Goodridgii, Scheer. Abundant at the summit of the island, and very large.

Cereus Emoryi, Engelm.

Opuntia var. occidentalis, Engel. and O. prolifera, Engel.

Mesembrianthemum aequilaterale, Harv. & M. crystallinum, L.

Apiastrum angustifolium, Nutt.

Daucus pusillus, Michx.

Galium Rothrockii, Gray.

Aplopappus squarrosus, Hooker & Arn.

Gnaphalium ramosissimum, Nutt.

Encelia Californica, Nutt.

Leptosyne maritima, Gray.

Perityle Californica, Benth.

Baeria gracilis, Gray, and B. anthemoides, Gray,

Eriophyllum confertiflorum, Gray,

Amblyopappus pusillus, Hooker & Arn.

Artemisia Californica, Less.

Stephanomeria v,rgata, Bentham.

Rafinesquia Californica, Nutt.

Microseris linearifolia, Gray,

Malacothrix insularis, Greene. On nearly level ground, just above the cliffs of the northern shore of the island, abundant.

Sonchus oleraceus, Linn.

Gilia multicaulis, Benth.

Nemophila aurita, Lindl.

Phabelia ixodes, Kellogg, and P. distans, Benth.

Krynitzkia barbigera, Gray, and K. maritima, Greene,

Dichondra repens, Forst,

Convolvulus occidentalis, Gray,

Lycium sp.?

Antirrhinum Nuttallianum, Benth.

Collinsia bicolor, Benth.

Mirabilis Californica, Gray,

Eriogonum fasciculatum, Benth.
Aphanisma blitioides, Nutt.
Chenopodium Californicum, Watson,
Atriplex Californica, Moq. and A. canescens, James,
Suaeda Torreyana, Watson,
Parietaria debilis, Forst,
Euphordia misera, Benth.
Calochortus splendens, Dougl.
Stipa sp.? Festuca Myurus, L., Bromus sp.? and Elymus condensatus, Presl. are the grasses found.
Polypodium Californicum, Kaulfuss, and Pellaea andromedaefolia, the only ferns seen. EDWARD L. GREENE.

CALIFORNIA PLANTS OF HORTICULTURAL VALUE.

In 1825, the interest in Western American botany culminated in a desire to know something more definitely of the floral productions of this region. Accordingly, under the auspices of the London horticultural society, David Douglas, a Scotch gardener, visited the Pacific coast and discovered many of the choicest treasures of California's flora. Other explorers followed after, sending seeds and plants to Europe for cultivation, many of which have met with the appreciation of every lover of flowers.

The Californian flora is probably richest horticulturally in its great variety of brilliant liliaceous plants—peculiarly its own, and which are extensively cultivated in Europe though little known in America. Our Southern Californian flora possesses certain Mexican characteristics in addition—such as cactuses, palms, etc., and is noted for its beautiful ferns and flowering shrubs.

The lily, the 'king of flowers,' is too well known to need the repitition of any stereotyped praises of its stateliness and beauty. There are about fifty species, of the northern temperate zone, extensively cultivated for their showy and often fragrant flowers.

The following Californian varieties are highly prized in Europe where some of the very handsome forms are in great demand:—

Lilium Parryi, stout, 2 to 5 ft. high; flowers lemon-yellow, large and very fragrant. Thrives in wet, sandy soil. Very rare.

L. Washingtonianum, tall, 4 to 6 ft. high, stout; white and very fragrant flowers. A beautiful species, growing in loose soil on ridges or lightly shaded hillsides.

L. rubescens, an exceedingly rare lily resembling the last, the flowers changing from white to dark ruby-red after opening.

L. parvum, slender, foliage light-colored; flowers from two to fifty in number, bell-shaped, light yellow center with brown dots, the upper half of petals scarlet.

L. maritimum, small, dark foliage, 2 to 5 ft. high; flowers deep crimson dotted with black, 2 to 20 in number.

L. pardalinum, tall, stout, leaves light green; flowers large, center yellow, tips of petals scarlet blotched with brown.

Var. puberulum, center of flowers light orange,—brilliant.

Var. Californicum,—the most brilliant form.

L. Humboldtii, large and stout. 3 to 8 ft. high, bulb very large, foliage dense; flowers orange colored, spotted with brown. Thrives in dry open places.

L. Columbianum, a graceful minature of the last.

The calochortuses, excepting the lilies, are the finest of the bulbous plants of California. The long, glossy leaf and the either short and weak or tall and strongly erect flower stems bearing few to many handsomely formed and brilliantly colored flowers render them particularly desirable. Those known as the star tulips are low and flexuous, usually nodding; and include the following:—

Calochortus albus, pendulus and pearly white.

Var. paniculata, dwarf form.

Benthami, light yellow, open bell-shaped.

Wallacei, similar to last, purple center to flower.

elegans, 'celestial star tulip,' lilac-white.

mauveanus, similar to the last.

caeruleus.

Tolmiei, pure lilac.

lilacinus.

nudus, white flowers.

The mariposa or butterfly tulips are erect, stout and many flowered; the flowers are large, open cup-shaped and of brilliant colors. The following are the principal varieties:—

Calochortus Weedii, deep yellow, with dark brown spots on each petal. Very fine and rare.

luteus, clear lemon yellow, darker at center.

Var. oculatus, very brilliant colors.

Var. citrinus, marked with scarlet.

venustus, petals white or pale lilac above, marked with maroon and gold.

splendens, petals lilac.

Palmeri, rose-purple, fine and rare.

longibarbatus.

Gunnisoni, a splendid form, petals lilac.

Leichtlini, creamy white, tinged with green on back.

The alliums or onions are pretty, small, flowers, mostly light to deep rose color. A. serratum is very dark and rich; A. unifolium is light rose; haematochiton, and fimbriatum, are other fine sorts.

Muilla maritima is whitish, resembling the alliums.

Bloomeria aurea is a fine plant, with large umbels of golden flowers. B. Clevelandi is similar but only a few inches high.

Brevoortia coccinea is a fine thing, the petals crimson, tipped with pea-green, related to the brodiaeas.

Camassia esculenta is 1 to 2 ft. high, stout with dark blue to nearly white flowers; C. Leichtlini has light blue flowers.

Zygadenus Fremontii, the California water-lily, bears creamy-white flowers in fine spikes, varying in height from a few inches to four feet according to the native ground.

Chlorogalum pomeridianum is tall and produces a spike bearing hundreds of small, pearly-white flowers.

Brodiaea is a genus of beautiful plants, peculiar to California, producing in midsummer clusters of bright, glossy flowers, generally of long duration. The prominent species are—

Brodiaea grandiflora, bearing a large, purple umbel;
minor, smaller than the above;
congesta, producing a slender scape;
capitata, showy;
gracilis, and B. ixioides, with yellow flowers.

The fritillarias are handsome plants related to the Crown Imperial: F. recurva is brilliant crimson; F. liliacea and pudica are white; atropurpurea, purple; lanceolata and parviflora yellow; and biflora nearly black.

Erythronium grandiflorum, 'dogstooth violet' is a pretty thing: var. albiflorum has large, yellow flowers and beautifully mottled leaves; var. Smithii produces nodding, bell-shaped, purple flowers.

(To be continued.)

REVIEWS.

'The botanical gazette' announces in its Association number of Sept. & Oct. that it will enlarge to 24 pp. at the close of its present, tenth, volume and increase its subscription price to $2. This is one of the ablest conducted, and the leading botanical, monthly in the country.

'The Century' completes its thirtieth volume with the October number, which contains an interesting 'Study in independent journalism,' with a portrait of Samuel Bowles. A finely illustra-

ted article on the 'Great river of Alaska' is contributed by that interesting writer, Frederick Schwatka. 'Tuscan cities,' 'The last days of General Grant,' and other papers render this number specially interesting to the general reader.

A new edition of the Naturalists' Directory is now in preparation and will be issued in January next by S. E. Cassino & Co., of Peabody, Mass.. Those interested in any branch of science should send in their names for insertion (for this no charge is made). It will be devoted to American naturalists and those in want of correspondents on any subject, or wishing to effect exchanges of any kind, will find the work of great value. Price, $2 in cloth, or $1.50 in paper.

'The naturalists' journal;' monthly, 50 cts. per year. Frankford, Philadelphia, Penn.

'Babyhood;' a monthly magazine for mothers. 18 Spruce st. New York. $1.50 per year.

'Queries;' a monthly review of literary, art, scientific and general educational questions of the day. Buffalo, N. Y. 50 cts. per yr.

SAN DIEGO COUNTY AGRICULTURAL AND HORTICULTUAL FAIR.

The first county fair held at San Diego on Oct. 28, 29 and 30, 1885, under the auspices of the horticultural society, was eminently a success and highly creditable to the city and county. It is impossible to give a correct idea of the fine display of northern fruits such as apples and pears, which was a pleasant surprise to every one.

The exhibits of semi-tropical fruits,—pomegranates, figs, Japanese persimmons, guavas, bananas, oranges, lemons, olives, grapes, etc. etc.—showed what the county was capable of producing in competition with the whole world.

The big squashes, melons and beets were not wanting. The comb and extracted honey was not to be excelled. Pottery from Elsinore represented a new industry for the county.

The art department was crowded with proof of real talent which would be an honor to any city of twice the population of San Diego.

The collections of minerals and fossils from the county were disappointing. The best one was from Elsinore, exhibited by Mr. John D. Hoff, consisting of gold ores, clays, etc. The botanical exhibits consisted of a cabinet of native and West Indian woods, and a few of the native grasses of the county. 'The native grass crop of San Diego county is now worth at least a million dollars annually,' yet they were classed among the 'Flowers and ornamental plants!'

The natural history department was highly creditable considering the number of naturalists, scarce half a dozen. A hundred and seventy species of fish were shown by Miss Rosa Smith; a fine collection of bird skins and eggs by Mr. Perley E. Kent, of Poway; and a large collection of coleoptera by Mr. O. N. Sanford.

Limnaea humilis was collected by the hundreds in April, 1885, in a small artificial pond in the vicinity of Todos Santos bay, Lower California. The pond was near ten years old, a few inches deep and about six feet across, fed by a windmill from a well twenty feet deep. For miles there is no surface water naturally and it was a great surprise to find this mollusk in such a location. How came it there?

SELECTED POPULAR MISCELLANEA.

The Brookville (Ind.) society of natural history has proposed the formation of a state academy of science.

There are in the United States thirteen well marked kinds of rattlesnakes, four moccasins or copperheads and four coral snakes, besides four small ground rattlesnakes. These are our only poisonous species.

Exchange notices are the means of increasing collections at slight cost.

A sporting association in Portland, Oregon, recently received sixty pheasants from China. They were presented to the state by Mr. Denny. The legislature refused to even pass suitable laws for their protection, so that the beautiful birds were shipped to an island in Puget sound where they can breed unmolested.

About three hundred amateur papers are now published in the United States. One by one they start and one by one they 'sell out,' 'are happy to inform their readers of having merged with—' or silently discontinue publication.

Portland, Oregon, can boast of a sea serpent story.

A new society of natural history has lately been formed in Humboldt Co.

About 59 provisional postage stamps were issued in 1861 by various post masters in southern cities prior to the regular issues of the Confederate States.

SCIENTIFIC SOCIETIES OF CALIFORNIA.

California academy of sciences. San Francisco. George Davidson, A. M., Ph. D. president; S. B. Christy, Ph. D., corresponding secretary. Has museum and library.

California state geological society. San Francisco. Henry G. Hanks, president; S. Heydenfeldt, jr., secretary.

Geographical society of the Pacific. San Francisco. (?)

Natural history society. San Francisco. Wm. H. Barrows, pres.; Wm. C. Flint corresponding secretary.

San Diego lyceum of natural history. (?)

San Diego society of natural history. George W. Barnes, pres.; Miss Rosa Smith, cor. secretary. Has museum and library.

San Francisco microscopical society. P. O. box, 1327, San Francisco.

Ventura society of natural history. San Buenaventura. Stephen Bowers, pres..

Santa Barbara society of natural history. H. C. Ford, pres.; Mrs. R. F. Bingham corresponding secretary.

Humboldt society of natural history. Arcata, Humboldt Co.. Carl C. Marshall, secretary.

Agassiz association. 17 chapters.

(Any information regarding California societies will be gladly received.)

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

SAN DIEGO SOCIETY OF NATURAL HISTORY. October 2, 1885. Present, 12 members and 3 visitors. Reports of committees:—John G. Capron, on preservation of Pinus Torreyana. Donations:—Mrs. E. D. Buell, spider; C. R. Orcutt, shells. Publications received:—Proceedings of the Minnesota academy of natural science; Proc. Canadian institute; Le naturaliste Canadien; Terraces of Potomahana (a poem) by Frank Cowan; Bulletin of the Essex institute; U. S. census, vol. ii; Report of the department of the interior, on mortality and vital statistics; The West American scientist. Communications:—Rosa Smith, on the scale insects (specimens exhibited). Committees appointed:—to petition congress for San Miguel mountain; on a society seal; on collecting the dues of the society, etc.; on the proposed exhibition at the county fair. Elections:—Rev. E. S. Chase and John P. Burt as active members; Miss S. S. Church as an associate member.

CHAMBER OF COMMERCE

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Meets First Thursday of Each Month.

Those desiring information relative to the city and county of San Diego will please address

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DOUGLAS GUNN, - - - PROPRIETOR.

THE UNION was established in 1868. Until 1871 it was published only once a week, when the daily edition was begun. THE DAILY UNION is published every morning except Monday. THE WEEKLY UNION is published every Thursday.

THE SAN DIEGO UNION is the oldest of the 41 newspapers published in Southern California. Of the 389 papers published in the State, 297 have been started since it began publication. It is more than five years older than 245 of the journals of California, and more than ten years the senior of 168 of them. It has a larger bona fide circulation than any other newspaper published in Southern California.

THE WEEKLY UNION

A large, eight-page paper of fifty-six columns, circulates very largely abroad, as well as at home. It goes to nearly every family in the county, and its subscribers "stay with it." It is conceded to be the best California weekly published out of San Francisco. Both daily and weekly editions circulate largely through Southern California, Arizona, New Mexico, and contiguous territory. It has subscribers in thirty-five of the thirty-eight States, and in six of the eight Territories, in British Columbia, Canada, England, Scotland, Ireland, France, Germany, Switzerland, Italy, Spain, the Sandwich Islands, China, Japan, and the Australian Colonies. The wide circulation, influential position and representative character of the paper are undisputed. Persons wishing accurate information respecting the Southern part of California should subscribe for THE UNION. Sample copies sent on application.

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THE CITY OF SAN DIEGO, CAL.

This city is situated upon the northerly side of the Bay of San Diego, about seven miles from the entrance to the harbor; latitude 32 deg. 40 m.; 480 miles southeast of San Francisco. Population about 5000—now steadily increasing. The site is one of the most picturesque and beautiful in the world. The Bay is about 15 miles long, and contains an area of more than 25 square miles. The land has an easy slope or grade for half a mile, and then rises more rapidly to an elevation of 150 to 200 feet, giving every part of the city a fine view of the Bay, the ocean, Coronada islands, Point Loma, Table mountain, and many other objects of interest and natural beauty. San Diego is 400 miles nearer New York city than San Francisco; also nearer China, Japan, Australia and the South Pacific Islands—a commercial advantage of great value. The city has seven churches, good schools, a public library and reading room, numerous secret orders, and places of amusement; also gas, water, street car and telephone companies. Many costly business blocks and stately residences are in process of erection or just completed, and the city is now improving more rapidly than at any previous time.

The Climate.—No place on the continent can show so favorable weather and health records. No heated terms in the summer or cold spells in the winter—no malaria. Physical labor is here performed with the least discomfort the year round. Professor Agassiz visited San Diego in August, 1872, and then said: "This is one of the favored spots of the earth, and people will come to you from all quarters to live in your genial and healthy atmosphere." Many have been disappointed and imposed upon by the ingenious and extravagant assertions of interested parties in favor of other places. Therefore we urge you, *if interested*, to examine the Signal Service and other reliable records. You will find that San Diego may rightfully claim the best climate to be found anywhere. Mean temperature—spring 60, summer 67, fall 63, and winter 54 degrees.

Health and Pleasure Resort.—Florida, Mt. Desert, and other places are good at some particular season—but San Diego, all the year round, as a summer resort, is the best in the world. All the conditions required to insure the greatest amount of recreation and benefit to the pleasure seeker, or those in declining health, are found in the City and County of San Diego—such as first-class hotels, boarding houses, good roads and drives, hunting, fishing sailing, sea baths, hot springs, clear skies, and many other features of interest to visitors.

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NOTICE:—This column will hereafter be open to offers to exchange books, instruments, specimens, etc. by subscribers. Right to refuse any notice reserved.

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Pinyone pine, Pinus Parryana, a very graceful tree, excellent for lawns, each, 25 cents, per 100 in box	10.00
Washingtonia filifera, California fan palm, each	.50
Guava, fine strawberry, in box, 15 cents each, per 100	8.00
Seeds, per ounce	.25
Melon shrub, each, 40 cents, per 100	25.00
Fremontia Californica, a small tree with showy flowers, each	.50

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no. 10

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